

COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
South Central Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Dominion Generation
5000 Dominion Boulevard, Glen Allen, Virginia
Permit No. SCRO30859

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Dominion Generation has applied for a Title V Operating Permit for the Altavista Power Station. The Department has reviewed the application and has prepared a DRAFT/PROPOSED Title V Operating Permit.

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FACILITY INFORMATION

Permittee

Dominion Generation
5000 Dominion Boulevard
Glen Allen, VA 23060

Facility

Altavista Power Station
104 Wood Lane
Altavista, VA 24517

County-Plant Identification Number: 51-031-00156

SOURCE DESCRIPTION

NAISC/SIC Code 221112/4911 - Fossil Fuel Electric Power Generation

Dominion Generation's Altavista Power Station (APS) manufactures electricity. The power station operates two, 382.5 MMBtu/hr coal-fired stoker boilers with associated coal, wood, lime, ash, and fuel oil handling systems. The facility has the potential to operate 8,400 hours per year.

The facility is a Title V major source of CO, NO_x, SO₂, and HAPs. This source is located in a designated PSD area for all pollutants (9 VAC 5-20-205), and is a PSD major source. The facility has a PSD Permit issued on February 21, 1990 and amended on April 9, 1990, December 16, 1993, May 13, 1996, January 9, 2003, November 5, 2003, and January 30, 2008. The facility also has a minor NSR permit last issued on January 30, 2008.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility are contained in the Section II.A table of the Title V permit. This table represents the current emission units at the facility as represented by APS' application information.

EMISSIONS INVENTORY

Emissions from calendar year 2006 are summarized in the following tables.

	2006 Criteria Pollutant Emission in Tons/Year				
	VOC	CO	SO ₂	PM ₁₀	NO _x
Total	5.26	137.9	112.1	19.5	606.1

Pollutant	2006 Hazardous Air Pollutant Emission in Tons/Yr
Chlorine	20.2
HCl	7.7
HF	0.97

EMISSION UNIT APPLICABLE REQUIREMENTS

The following section discusses requirements for the emissions units at APS. These requirements come from APS' NSR permits dated January 30, 2008 or applicable federal requirements. The conditions are not repeated verbatim from the permit.

APS currently has separate Title V and Title IV permits. With this action, the two permits will be combined such that the expiration dates match. In doing this, the general authority moves from 9 VAC 5-80 Article 1 to the corresponding portions in 9 VAC 5-80 Article 3. The regulatory citations have been updated to reflect this change.

Citations

The following citations denote the underlying authorities to implement the specific conditions in the NSR permits.

9 VAC 5-50-20, 9 VAC 5-50-30, 9 VAC 5-50-40, 9 VAC 5-50-50, 9 VAC 5-50-90, 9 VAC 5-50-260, 9 VAC 5-50-280, 9 VAC 5-50-410, 9 VAC 5-60-30, 9 VAC 5-60-40, 9 VAC 5-80-1180, 9 VAC 5-80-1210, 9 VAC 5-80-1705, 9 VAC 5-80-1715, and 9 VAC 5-80-1985.

Section III of Title V Permit – Primary Boilers (001 and 002)

Limitations

The two primary boilers are fired with coal or a coal-wood combination. Distillate oil and natural gas are the approved start-up fuels. The oil's sulfur content is limited by Condition III.A.8 and 9. Emission limits are based on worst-case burning scenario for each pollutant (i.e., 100% coal).

Each primary boiler is equipped with an overfire air system (staged combustion), a selective non-catalytic reduction (SNCR) system for NO_x removal, a multi-cyclone and fabric filter for particulate control, and a spray dryer absorber (dry scrubber) to remove SO₂ (EC-1a,b,c,d and EC-2a,b,c,d).

Monitoring

Continuous emissions monitors are used to monitor CO, NO_x, and SO₂ emissions from each boiler and a continuous opacity monitor measures opacity from the combined boiler exhausts.

The permit requires testing of the two primary boilers for PM and PM-10 once per permit term using applicable methods listed in 40 Code of Federal Regulations, Part 60, Appendix A and 40 Code of Federal Regulations 51, Appendix M or other methods as approved by DEQ. The Department and EPA have authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Compliance Assurance Monitoring (CAM) applies to PM₁₀ from the boilers. The CAM conditions are contained in Section III.B of the Title V permit. The COMS is utilized as the primary indicator, with the source completing supplementary actions in the case of an excursion. These items are contained in Tables 1 and 2 of Condition III.B.9.

Former Condition III.B.8 was moved to Condition III.E.2 as this condition is a reporting requirement. Subsection E contains the applicable reporting requirements for the primary boilers.

The wording “with the exception that CO data are not to be substituted or biased” was added to Condition III.B.6 to clarify that NSPS Subpart Da requirements for the CO data handling is intended (see Condition III.B.5). NSPS Subpart Da specifies that Part 75 substitution and bias procedures do not apply. This wording does not change the underlying requirement. Condition III.B.7 was clarified by inserting the actual permit signature date as the “initial effective date”.

Recordkeeping and Reporting

APS is required to keep records sufficient to demonstrate compliance with the conditions of the permit.

The format of the reporting requirements has changed to ensure clarity of the requirements.

Streamlined Requirements

The stack height requirement for the auxiliary boiler from the January 9, 2003 permit has been streamlined from the Title V permit. This requirement has been met.

NSPS Subpart Da emission limits, applicable to the primary boilers, for PM, Opacity, SO₂ and NO_x, are less stringent than the corresponding NSR requirements and have been streamlined out of the permit. Appropriate NSPS citations have been included in the corresponding permit condition in section III.A of the Title V Permit.

NSPS Subpart Da SO₂ emissions reduction requirement of 40 CFR 60.43a, applicable to the primary boilers, is less stringent than the corresponding SO₂ reduction requirement from the

NSR permit. The NSPS requirement has been streamlined out and the corresponding NSR reduction requirement is included in Section III.A. of the Title V permit. NSPS citations have been included in the Title V permit for this condition.

Section IV of Title V Permit – Auxiliary Boiler (003)

Limitations

APS also has a 146.4 MMBtu/hr “auxiliary” boiler (Unit ID 003) to provide steam during times when the plant is not generating electricity. The approved fuels are natural gas and distillate oil. The oil’s sulfur content is limited by Conditions IV.A.3 and 4. The auxiliary boiler is equipped with flue gas recirculation and low NOx burners to limit NOx emissions (EC3-a,b). The sulfur content of the fuel oil is limited by Conditions IV.A.3 and 4.

Former Condition IV.A.6 was incorporated into Condition IV.A.5 to reflect that the underlying NSR permits are formatted as only one condition. Conditions were renumbered as necessary.

Monitoring

Continuous emission monitors are used to measure SO₂ and NOx emissions from the auxiliary boiler stack and a continuous opacity monitor is installed to measure opacity of the flue gas.

Recordkeeping and Reporting

APS is required to keep records sufficient to demonstrate compliance with the conditions of the permit.

The format of the reporting requirements has changed to ensure clarity of the requirements.

Streamlined Requirements

NSPS Subpart Db emission limits, applicable to the auxiliary boiler, for opacity, SO₂ and NOx are less stringent than the limits for these pollutants in the NSR permit. The NSPS limits have been streamlined out and corresponding limits from the NSR included in Section IV.A. of the Title V permit. NSPS citations have been included in the Title V permit for this condition.

Section V of Title V Permit – Combined Boiler Limitations

Limitations

The limitations are annual emissions limitations and a condition limiting combined use of the primary and auxiliary boilers.

Monitoring

The monitoring provisions for the requirements are reflected in Sections III and IV, for the specific emissions units.

Recordkeeping

The recordkeeping provisions for the requirements are reflected in Sections III and IV, for the specific emissions units.

Streamlined Requirements

None

Section VI of Title V Permit – Diesel Engines (005 and 006)

Limitations

The diesel engine sources located at the site include a portable auxiliary generator engine, a backup boiler feed water pump and an emergency firewater pump (Unit ID 004-006). These units provide redundant or backup services.

Monitoring

Due to their small size (410 kW generator, 126 BHP emergency feedwater pump and 208 BHP emergency fire pump) and limited allowed operations (combined total of 382 hours per year) no periodic opacity observations are required for the three internal combustion engines. The T5 permit includes restrictions brought forward from the NSR permits that limit hours of operation, fuel type and fuel sulfur content. The periodic monitoring requirements for these emissions units are satisfied by these permit conditions.

Recordkeeping

APS is required to keep records sufficient to demonstrate compliance with the conditions of the permit.

Streamlined Requirements

None

Section VII of Title V Permit – Coal, Wood, Ash & Lime Handling Requirements - (007-017, 019, 020-023, 025)

Limitations

Coal is delivered to the facility by railcar. The coal handling and storage operations consist of railcar unloading, coal conveying and crushing, an active storage pile, and four coal silos (Unit ID 007-017, 019-023). Wood handling operations include wood conveying and storage, wood pulverizing and emergency wood loading to trucks for off-site disposal. Lime for the spray dryer is delivered by truck and conveyed pneumatically to the lime silo. Ash generated in the combustion process is conveyed to the recycle bin or the ash storage silo. The ash from the ash storage silo is loaded to trucks for off-site disposal. Dust suppression measures for the material handling systems include water sprays, fabric filters, and conveyor covers installed at critical points.

Monitoring

The coal, wood, and ash handling systems are a source of PM emissions. Periodic monitoring required by the permit is a weekly observation for visible emissions accompanied by a Method 9 visible emissions evaluation if any visible emissions are noted during the observation. The requirement for periodic monitoring is satisfied by these observations and evaluations.

Recordkeeping

APS is required to keep records sufficient to demonstrate compliance with the conditions of the permit.

Streamlined Requirements

NSPS Subpart Y emission limits, applicable to the coal handling operations, for opacity, are less stringent than the limit for opacity in the NSR permit. The NSPS limit has been streamlined out and the corresponding limit from the NSR included in section VII.A. of the Title V permit. NSPS citations have been included in the Title V permit for this condition.

Section VIII of Title V Permit – Distillate Fuel Oil Storage Tank Requirements - (024) Limitations

The NSPS Subpart Kb requirement in 40 CFR 60.116b for this tank is reflected in this permit.

Section IX of Title V Permit – Facility Wide Conditions

In this section, general recordkeeping requirements applying to all units at the facility are listed. Condition IX.A.2 is a condition from the minor NSR permit dated January 30, 2008. Condition IX.A.3 reflects the applicable requirements of 9 VAC 5-80-1785 concerning projects at a major stationary source (PSD).

Section XII of Title V Permit – Title IV (Acid Rain)

The two spreader stoker boilers are affected facilities under 40 CFR 72.6 and 9 VAC 5 Chapter 80 Article 3. APS' current Title IV permit expires on December 31, 2008.

Prior to purchase by Dominion, APS was an independent power producer (IPP) as defined in 40 CFR Part 72, and therefore exempt from the requirements of the Acid Rain program per Section 72.6(b)(6). The facility ceased to satisfy the definition of an IPP upon its acquisition by Dominion on March 23, 2001, and thus became an affected source under the Acid Rain program on that date. The facility is located in Altavista, Campbell County, Virginia.

SO₂ Allowances

The two spreader stoker boilers are not allocated any SO₂ allowances. Altavista Power Station will have to obtain enough sulfur dioxide emission allowances to equal what they emitted by the "allowance transfer deadline" for each calendar year. SO₂ allocations are not necessary to start construction or to operate.

NOx Applicability

The two spreader stoker boilers are not subject to NOx emission reductions. The NOx acid rain regulations list stoker-fired boilers as Group II boilers; however, there are no NOx emission limitations listed for these types of boilers in 40 CFR 76.6.

Section XIV of Title V Permit – Clean Air Interstate Rule (CAIR)

The CAIR program replaces the NOx Budget Trading Program as of January 1, 2009¹. To facilitate matching the terms of the Title IV and Title V permits, this permit will have an effective date of January 1, 2009. Since this permit will not be effective until after the NOx Budget Trading Program requirements are repealed, the requirements (formerly Section XIV of the previous Title V permit) have been deleted. CAIR will be the implementing function of the NOx SIP Call.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-490 that apply to all Federal-operating permitted sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

There are no emissions units subject to 9 VAC 5 Chapter 40; therefore, references to Chapter 40 have been removed from the General Conditions.

FUTURE APPLICABLE REQUIREMENTS

This permit will be effective on January 1, 2009, the first effective date for CAIR requirements. There are no known future applicable requirements.

INAPPLICABLE REQUIREMENTS

The existing engines currently at APS are not subject to 40 CFR 63 Subpart ZZZZ, Stationary RICE MACT. Their rating is less than the 500 bhp (output) currently required in the RICE MACT. In promulgating the area MACT standard in the RICE MACT, EPA notes reconsideration of the existing source standards is required based on a U.S. Court of Appeals for the District of Columbia decision². Since EPA is still considering the promulgation of existing engine standards for engines such as APS', the MACT is not included in the Inapplicable Requirements section.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units (as shown in Section X of the permit) are presumed to comply

¹ See Federal Register dated May 12, 2005 (promulgation of CAIR) for a discussion of the interaction between the two programs.

² See 73 FR 3569 for more detail in this decision.

with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-490.

CONFIDENTIAL INFORMATION

None

PUBLIC PARTICIPATION

The DRAFT/PROPOSED permit was placed on public notice in Lynchburg's *The News&Advance* on May 7, 2008. The public comment period ends on June 6, 2008. EPA's 45-day review period ends on June 21, 2008.